

REMARKS

This amendment is responsive to the Office Action mailed October 8, 2008. The Office Action rejected Claims 1, 7, 12, 27, and 34 under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. In addition, Claims 1-22, 24, and 26-39 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Keiser et al. (US 6,505,174) in view of White, Jr. (US Pub. 2002/0023037).

Claims 1-22, 24, and 26-39 Claims 1, 3-10, 12-14, 17, 18, 20-22, 24, 26, 27, 34-36, 38, and 39 have been amended. New Claims 40 and 41 have been added. Claims 1-22, 24, and 26-41 are thus pending in the application.

Applicant has carefully considered the cited references and the comments provided in the Office Action, and respectfully submits that the claims presented herewith are patentable over the cited art. For at least the reasons discussed below, applicant respectfully requests reconsideration of the claims and allowance of the application.

Claims 1, 7, 12, 27, and 34 Recite Statutory Subject Matter

Applicant respectfully submits that Claims 1, 7, 12, 27, and 34 are directed to statutory subject matter and thus meet the requirements of 35 U.S.C. § 101.

In particular, amended Claims 1, 7, and 12 each recite a "computer-implemented" method. Furthermore, the methods are implemented "under control of instructions executed by one or more processors in a computer system." In addition, with respect to Claim 1, "the notifying, determining, and providing are performed by a second computer process executing on a computer." With respect to Claim 7, "the receiving, determining and offering are performed by a first computer process executing on a computer," and according to Claim 12, "the maintaining, engaging and providing are performed by a second computer process executing on a computer."

Accordingly, each of independent Claims 1, 7, and 12 is tied to a particular machine or apparatus and satisfies the legal precedent set forth in the Office Action, as well as the "machine-or-transformation test" set forth in *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008). Applicant

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respectfully requests that the rejection of Claims 1, 7, and 12 under 35 U.S.C. § 101 be withdrawn.

Claim 27, for its part, recites a "computing system" comprising a "notification component" and an "evaluation component." Both the notification component and the evaluation component are "executing on at least one computer processor." Claim 27 is thus tied to a particular machine or apparatus and satisfies the legal precedent set forth in *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008). Applicant respectfully requests that the rejection of Claim 27 under 35 U.S.C. § 101 be withdrawn.

Lastly, applicant submits that Claim 34 recites statutory subject matter. In particular, Claim 34 recites a "computer-accessible storage medium containing computer program instructions that, when executed, cause a computer to participate in pricing of a security by" undertaking certain actions. As such, Claim 34 is directed to an article of manufacture that has been expressly recognized by the U.S. Patent and Trademark Office as meeting the requirements of 35 U.S.C. § 101. Applicant therefore requests that the Section 101 rejection of Claim 34 be withdrawn.

Claims 1-6, 17, 19, and 24 Are Patentable Over The Cited Art

Applicant has considered the disclosures of Keiser and White, Jr. and respectfully submits that Claims 1-6, 17, 19, and 24 are patentable over the cited art. For convenience of examination, amended Claim 1 reads as follows:

1. A computer-implemented method of providing a published price for a security, wherein the published price is available to a plurality of market participants in a market to execute a trade for the security, the method comprising:

under control of instructions executed by one or more processors in a computer system:

notifying a set of first computer processes of a proposed price for buying or selling the security, wherein the set of first computer processes represents a subset of the plurality of market participants, and wherein a trade for the security at the proposed price is not executable at the market,

determining whether any of the first computer processes has offered an improved price for the security, wherein the improved price is higher than the proposed price for buying the security or lower than the proposed price for selling the security, and

if an improved price has been offered, providing the improved price as a published price to the plurality of market participants, wherein the market participants can execute a trade for the security at the published price, and

wherein the notifying, determining, and providing are performed by a second computer processes executing on a computer.

Whether considered individually or in combination, the disclosures of Keiser and White Jr., fail to teach or suggest all of the elements recited in Claim 1. Moreover, applicant submits there is no rational underpinning or recitation of facts showing that the subject matter of Claim 1 would be obvious to a person of ordinary skill in the art. Accordingly, the rejection of Claim 1 under 35 U.S.C. § 103(a) should be withdrawn.

For example, Keiser fails to teach or suggest the element of "notifying a set of first computer processes of a proposed price for buying or selling the security, wherein the first set of computer processes represents a subset of the plurality of market participants" as recited in Claim 1. The Office Action referred to the abstract and Col. 2, lines 57-67, and Col. 3, lines 1-28, of Keiser, but these passages merely teach a well-known process in which a user obtains and executes a securities trade based on a *published* buy or sell price. This well-known process is expressly acknowledged in the background of the present application at page 1, lines 10-11. Moreover, Keiser discloses nothing about a first set of computer processes that represent a subset of a plurality of market participants.

Applicant has previously pointed out and repeats here for emphasis that Claim 1 uses different terms to refer to a "*published* price" and a "*proposed* price." A "*published* price" is not the same as a "*proposed* price." Claim 1 explicitly recites "wherein the market participants can execute a trade for the security at the published price" while "a trade for the security at the proposed price is not executable at the market." (Emphasis added).

Keiser may teach a "published price" for buying or selling a security (see "market price," for example, recited in the abstract), but Keiser does not teach a process of "notifying a set of first computer processes of a proposed price," as claimed.

In at least one aspect, a "proposed price" may be "determined...based on a booked order in an order book," as recited in Claim 24. In another aspect, considering Claim 6, the method may include "comparing [the] current book price to [the] most recent trade price and deciding to notify . . . the proposed price when the current book price is different than the most recent trade price." Keiser fails to teach these features, notwithstanding the reference in the Office Action to the abstract; Col. 6, lines 45-65; and Col. 27, lines 10-25, of Keiser.

Returning to Claim 1, Keiser also fails to teach or suggest the elements of "determining whether any of the first computer processes has offered an improved price for the security, wherein the improved price is higher than the proposed price for buying the security or lower than the proposed price for selling the security, and if an improved price has been offered, providing the improved price as the published price to the plurality of market participants." The Office Action acknowledged the failure of Keiser in this regard and sought to rectify the deficiency by combining Keiser with the disclosure of White Jr. However, the disclosure of White Jr. does not overcome the deficiencies of Keiser.

The Office Action cited column (or page) 1, paragraph 0007, and column (or page) 9, paragraph 0208, but these portions of White Jr. neither teach nor suggest the elements of Claim 1 recited above. At paragraph 0007, White Jr. merely summarizes well-known offer matching techniques that determine whether a particular offer can be executed. Using the example provided by White Jr., if a buy order for "Acme common stock" is received for \$1.00 per share or better, and a contra-side sell order is received offering to purchase Acme common stock for \$1.00 per share or better, White Jr. states that the existing offer matching systems can pair these two orders, causing the parties to be obligated to buy or sell the respective shares, and complete a trade.

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Nowhere, however, is there a "proposed price" at which a trade "is not executable at the market" nor is there an "improved price" that is provided "as the published price to the plurality of market participants, wherein the market participants can execute a trade for the security at the published price," as claimed in Claim 1. It therefore follows that White Jr. also fails to teach or suggest "determining whether any of the first computer processes has offered an improved price for the security, wherein the improved price is higher than the proposed price for buying the security or lower than the proposed price for selling the security."

At paragraph 0208, White Jr. acknowledges that some offers may be given execution priority over other offers if certain criteria are met. These criteria typically relate to time and size of the offers for the item(s) to be traded. For example, buy offers that specify a higher limit price or were submitted sooner to the market or were for a larger quantity, etc., may be matched with a contra-side order sooner than other less favored buy offers (e.g., offers that are submitted later or involve a smaller quantity of item(s) to be traded). White Jr. explains that an investor might wish to know about active buy offers that have an execution priority higher than the investor's offer. White Jr. mentions that the investor can go to a web site where the investor can supply an offer identifier identifying the investor's buy order and ask for information about the trades of others. This disclosure, however, is not relevant to the claims in the present application. Simply put, the disclosure of White Jr. does not overcome the many deficiencies of Keiser as noted above.

When rejecting claims under 35 U.S.C. § 103, the examiner must provide evidence that, as a whole, shows the legal determination of obviousness to be more probable than not. M.P.E.P. §2142. "The key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious." See *KSR International Co. v. Teleflex, Inc.*, 550 U.S. __, 82 U.S.P.Q. 2d 1385 (1395-97 (2007).

The combination of Keiser and White Jr. (which combination applicant specifically denies as being proper) does not support a *prima facie* rejection of Claim 1. Accordingly, the rejection of Claim 1 under 35 U.S.C. § 103(a) should be withdrawn and the claim allowed.

Claims 2-6, 17, 19, and 24 are patentable for at least the same reasons presented above with respect to Claim 1, and for the additional subject matter they recite which is not taught or suggested by the cited art. Accordingly, Claims 2-6, 17, 19, and 24 should be allowed.

Claims 7-11 and 26 Are Patentable Over The Cited Art

Amended Claim 7 reads as follows:

7. A computer-implemented method of participating in pricing of a security at a market at which trades are made with respect to the security, the method comprising:

under control of instructions executed by one or more processors in a computer system:

receiving a proposed price for the security from a second computer process, wherein the second computer process is providing the market, and wherein a trade for the security at the proposed price is not executable at the market,

determining whether to improve upon the proposed price for the security by offering an improved price that is higher than the proposed price for buying the security or lower than the proposed price for selling the security, and

when the determination is affirmative, offering the improved price to the second computer process, which improved price can be provided by the second computer process as a published price to a plurality of market participants at the market, and a trade at the published price being executable by the market participants at the market,

wherein the receiving, determining and offering are performed by a first computer process executing on a computer.

The disclosures of Keiser and White Jr., whether considered individually or in combination, fail to teach or suggest all of the elements recited in Claim 7.

For example, Keiser fails to teach or suggest a method of participating in the pricing of a security that includes the element of "receiving a proposed price for the security from a second computer process, wherein the second computer process is providing the market, and wherein a trade for the security at the proposed price is not executable at the market." As discussed above

with respect to Claim 1, a "published price" is not the same as a "proposed price." The cited passages in Keiser at Col. 2, lines 57-67, and Col. 3, lines 1-28, merely teach a known process in which a user obtains and executes a securities trade based on a published buy or sell price. There is no disclosure in Keiser of "receiving a proposed price [that] . . . is not executable at the market."

Keiser also fails to teach or suggest the elements of "determining whether to improve upon the proposed price for the security by offering an improved price that is higher than the proposed price for buying or lower than the proposed price for selling, and when the determination is affirmative, offering the improved price to the second computer process, which improved price can be provided by the second computer process as a published price to a plurality of market participants at the market, the published price being executable by the market participants at the market."

Acknowledging deficiencies in Keiser, the Office Action further relied on the disclosure of White Jr. However, the disclosure White Jr. (alone or in combination with Keiser) fails to support a *prima facie* rejection of Claim 7.

As with Claim 1, the Office Action cited White Jr. at column (or page) 1, paragraph 0007, and column (or page) 9, paragraph 0208. However, these portions of White Jr. neither teach nor suggest the elements of Claim 7 recited above. White Jr. merely summarizes well-known offer matching techniques that determine whether a particular offer can be executed, and further states that an investor can learn why offers of others may enjoy execution priority over the investor's offers. White Jr. neither teaches nor suggests the elements of Claim 7 that are missing from Keiser.

Applicant contends that a person skilled in the art would not combine the disclosures of Keiser and White Jr., but even if they were combined, the disclosures do not teach or suggest all of the elements of Claim 7 and the Office Action has not otherwise provide a rational explanation of facts showing why the claimed invention would be obvious. The cited references

thus do not support a *prima facie* rejection of claim 7 based on obviousness. Accordingly, Claim 7 should be allowed.

Claims 8-11 and 26 are dependent on Claim 7 and thus are patentable for at least the same reasons presented above with respect to Claim 7. Applicant further submits that Claims 8-11 and 26 are patentable for the additional subject matter they recite, which is not taught or suggested by Keiser and White Jr., notwithstanding the cited passages in Keiser at Col. 2, lines 25-35; Col. 3, lines 15-65; Col. 4, lines 5-56; Col. 6, lines 45-55; Col. 21, lines 60-65; and Col. 27, lines 10-25 (cited with respect to Claims 8 and 9). Claims 8-11 and 26 should be allowed.

Claims 12-16, 18, and 20-22 Are Patentable Over The Cited Art

Amended Claim 12 reads as follows:

12. A computer-implemented method of setting a price for a security, the method comprising:

under control of instructions executed by one or more processors in a computer system:

maintaining an order book for a market at which trades are made with respect to the security, said order book including orders to buy or sell specified quantities of the security at respective prices, the lowest sell order price of the booked orders being the book sell price, the highest buy order price of the booked orders being the book buy price,

engaging in a price discovery procedure with a set of first computer processes before responding to a request for a current buy or sell price of the security, wherein the price discovery procedure produces a discovered price for the security, and

providing the discovered price as the current buy or sell price of the security to a plurality of market participants participating in the market, the discovered price being higher than the book buy price or lower than the book sell price,

wherein the maintaining, engaging and providing are performed by a second computer process executing on a computer.

The Office Action has not established a *prima facie* case of obviousness of Claim 12. Keiser and White Jr., alone or in combination, do not teach each and every element of Claim 12,

and there is no factual basis to suggest that a person of ordinary skill in the art would nevertheless find Claim 12 to be obvious.

Notably, Keiser does not teach a method of setting a price for a security that includes, *inter alia*, the elements of "engaging in a price discovery procedure with a set of first computer processes before responding to a request for a current buy or sell price of the security, wherein the price discovery procedure produces a discovered price for the security" and "providing the discovered price as the current buy or sell price of the security to a plurality of market participants participating in the market, the discovered price being higher than the book buy price or lower than the book sell price."

Conceding deficiencies in Keiser, the Office Action relied on the disclosure of White Jr. However, White Jr. is also deficient with respect to the elements of Claim 12. The Office Action (page 6) cites an example provided by White Jr. in which if a buy order for "Acme common stock" is received for \$1.00 per share or better, and a contra-side sell order is received offering to purchase Acme common stock for \$1.00 per share or better, the existing offer matching systems can pair these two orders, causing the parties to be obligated to buy or sell the respective shares, and complete a trade. This example does not constitute a disclosure of a price discovery procedure that produces a discovered price that is higher than the book buy price or lower than the book sell price that is provided to a plurality of market participants, as claimed in Claim 12.

Thus, even if Keiser and White Jr. are combined (which applicant denies is proper), the resultant combination does not disclose all of the elements of Claim 12. As a result, Claim 12 would not be obvious to a person skilled in the art and is therefore patentable over the teachings of Keiser and White Jr.

Claims 13-16, 18, and 20-22 dependent from Claim 12 and thus are patentable for at least the same reasons presented above with respect to Claim 12. Applicant further submits that Claims 13-16, 18, and 20-22 are patentable for the additional subject matter they recite, which is not taught or suggested by the cited art. The cited passages in Keiser at Col. 2, lines 5-65;

Col. 3, lines 15-65; Col. 4, lines 5-56; Col. 6, lines 45-65; and Col. 27, lines 10-25, simply do not disclose what is claimed in Claims 13-16, 18, and 20-22 . Accordingly, Claims 13-16, 18, and 20-22 should be allowed.

Claims 27-33 Are Patentable Over The Cited Art

Claim 27 is directed to a computing system for providing a published price for a security to a plurality of market participants at a market at which trades are made with respect to the security. The computing system includes a notification component executing on at least one computer processor, wherein the notification component is configured to notify a set of the plurality of market participants of a proposed price for trading the security and a trade for the security at the proposed price is not executable at the market.

Furthermore, as claimed, the computing system includes an evaluation component that is configured to determine whether any of the set of market participants has offered an improved price for the security, wherein the improved price is higher than the proposed price for buying or lower than the proposed price for selling. If an improved price has been offered, the evaluation component is configured to provide the improved price as the published price to the plurality of market participants, wherein the market participants can execute a trade for the security at the published price. The notification component is configured to notify the set of market participants of the proposed price prior to the evaluation component providing the published price.

Applicant has considered the disclosures in Keiser and White Jr., and respectfully submits that, for at least the reasons discussed above, the cited art does not disclose the computing system claimed in Claim 27. Claim 27 should thus be allowed. Additionally, applicant submits that Keiser and White Jr. fail to teach the elements disclosed in dependent Claims 28-33, which should also be allowed.

Claims 34-37 Are Patentable Over The Cited Art

Claim 34 is directed to a computer-accessible medium containing computer program instructions. The instructions, when executed, cause a computer to participate in pricing of a security by receiving a proposed price for the security from a computer processes, wherein the computer process is providing a market at which trades are made with respect to the security, and wherein a trade for the security at the proposed price is not executable at the market. Further, the instructions, when executed, cause the computer to determine whether to improve upon the proposed price for the security by offering an improved price that is higher than the proposed price for buying the security or lower than the proposed price for selling the security, and when the determination is affirmative, then offer the improved price to the computer processes. The improved price can be provided by the computer processes as a published price to a plurality of market participants at the market, and a trade at the published price being executable by the market participants at the market.

For at least reasons similar to those discussed above with respect to Claim 7, applicant submits that the disclosures in Keiser and White Jr. do not disclose the computer-accessible medium claimed in Claim 34. Claim 34 should thus be allowed. Additionally, Keiser and White Jr. fail to teach the elements disclosed in dependent Claims 35-37, and thus, Claims 35-37 should be allowed.

Claims 38 And 39 Are Patentable Over The Cited Art

Claims 38 and 39 are system claims written in means plus function form. Applicant submits that Claims 38 and 39 are in allowable condition for at least the same reasons that Claims 1 and 12 are patentable over the prior art.

New Claims 40 and 41 Are Patentable Over The Cited Art

New Claim 40 is directed to a computer-accessible storage medium containing computer program instructions for providing a published price for a security. The instructions, when executed, cause a computer to: notify a set of first computer processes of a proposed price for

buying or selling the security, wherein a trade for the security at the proposed price is not executable at the market, determine whether any of the first computer processes has offered an improved price for the security, wherein the improved price is higher than the proposed price for buying or lower than the proposed price for selling, and if an improved price has been offered, provide the improved price as the published price to the plurality of market participants. The market participants can execute a trade for the security at the published price.

Claim 41 depends from Claim 40 and recites "instructions, when executed, further cause the computer to compare a current book price to a most recent trade price and decide to notify the first computer processes of the proposed price when the current book price is different than the most recent trade price."

For at least reasons similar to those discussed above with respect to Claims 1 and 6, applicant submits Claims 40 and 41 are patentable over Keiser and White, Jr.

Information Disclosure Statements

Applicant respectfully requests consideration of the information disclosure statement submitted on September 9, 2006, as well as the information disclosure statement submitted herewith.

CONCLUSION

The disclosures of Keiser and White Jr. do not support a *prima facie* rejection of Claims 1-22, 24, and 26-39. Allowance of the application is therefore warranted. Should any issues remain needing resolution prior to allowance of the application, the Examiner is invited to contact the undersigned counsel at the telephone number provided below.

Respectfully submitted,

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